

Title (en)
THERMAL RESPONSIVE POLYMER SILOXANES, COMPOSITIONS, AND METHODS AND APPLICATIONS RELATED THERETO

Title (de)
AUF WÄRME ANSPRECHENDE POLYMERSILOXANE, ZUSAMMENSETZUNGEN UND VERFAHREN UND ANWENDUNGEN IM ZUSAMMENHANG DAMIT

Title (fr)
SILOXANES POLYMÈRES SENSIBLES À LA CHALEUR, COMPOSITIONS, PROCÉDÉS ET APPLICATIONS SE RAPPORTANT À CEUX-CI

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Application
EP 08743088 A 20080418

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Abstract (en)
[origin: WO2008130650A1] The invention relates to materials comprising siloxanes, preferably the materials have thermal-responsive properties. In some embodiments, the invention relates to silsesquioxane groups functionalized with polymers. In another embodiment, silsesquioxane-polymer conjugates comprise polylactone segments. The silsesquioxane- polymer conjugates may be crosslinked together to form a material, and these materials may be functionalized with bioactive compounds so that the materials have desirable biocompatibility or bioactivity when used in medical devices. In further embodiments, the invention relates to composite materials that contain a polymer matrix and aggregates, and in some embodiments, methods of making, and methods of using these materials. Preferably, the aggregates are calcium phosphate aggregates. Preferably, the material is resistant to fracture. In further embodiments, the materials are used in surgical procedures of bone replacement. In further embodiments, the materials contain polyhedral silsesquioxanes and/or biodegradable segments.

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